TWO NEW BEES OF THE GENUS TRIEPEOLUS

BY T. D. A. COCKERELL AND P. H. TIMBERLAKE

It is very astonishing that in spite of all the work done on western *Triepeolus,* the two finest species at Riverside are not merely new, but very distinct.

Triepeolus subnitens Cockerell and Timberlake, n. sp.

Male (Type). Length a little over 15 mm.; black, with the labrum, greater part of mandibles, scape, third antennal joint broadly in front, and legs, chestnut red; pubescent markings pale ochreous, but white across face in region of antennæ, on middle and hind coxæ, as well as on the three ventral bands of abdomen, while the large patches at sides of fifth tergite are almost white, the marginal hair below them pure white; eyes (dry) with less than upper half pale greenish, the rest dark gray; labrum rugulose; clypeus and supraclypeal area bare, shining, with sparse conspicuous punctures and very numerous minute ones; scutellum strongly bilobed, axillæ little produced; the light pubescent areas of thorax include upper border of prothorax with tubercles (which are black, not red), lateral margins of mesothorax and scutello-mesothoracic suture, a pair of clean-cut narrow-fusiform marks on anterior part of mesothorax (diverging anteriorly and ending obtusely some distance from anterior margin), postscutellum and posterior margin of scutellum, about upper half of mesopleura (the lower margin of the pubescence concave), and (more thinly) the posterior part of metathorax except the enclosure; area of metathorax shining, except the median pit; tegulæ black, the margin brownish; wings suffused with brownish; second cubital cell receiving recurrent nervure at middle; spurs black; hair on inner side of hind basitarsi dark fuscous, red along the margin; abdomen robust, the last sternite not at all directed downward apically; black area on first tergite a broad transverse band, obliquely truncate laterally, the basal and apical bands of tomentum narrowly interrupted; bands of tomentum on segments two to four broad, on two with a linear interruption, on the others entire; band on second with large lateral extensions anteriorly, forming an acute angle with the band; fifth tergite densely punctured, with large lateral hair patches.

Female. Length less than 13 mm.; eyes pale pea-green; face with silvery-white hair, only the lower part of the densely punctured clypeus bare; scape thick, black, dark red at extreme base; third antennal joint with a red patch on outer side; mesothorax with the marginal hair-bands extending anteriorly to meet and include the discal marks, which become posteriorly directed pointed extensions from the ends of the marginal bands; mesopleura hairy, with a thin more or less bare area on lower part; second cubital cell receiving recurrent nervure well before middle; band on sixth tergite white; hair on inner side of hind basitarsi clear red.

Riverside, California (*Timberlake*); the female at *Helianthus annuus,* June 28, 1927; the male at *Gutierrezia sarothræ,* June 28, 1928.

The sexes look like distinct species. This species falls in the tables near *T. fortis* Ckll., but is easily distinguished by the hairy pleura of the male; while the black band which reaches the anterior margin of mesothorax in middle is conspicuously broadened apically in both sexes, whereas it is parallel sided or even contracted in *T. fortis.* The affinities of the species are with the group of forms classified as races of *T. helianthi* Rob., but it is amply distinct from all of them. *T. helianthi arizonensis* Ckll., found at Phoenix, Arizona, has the male only about 8 mm. long, and the pubescent margin of first tergite not broken anteriorly or posteriorly, but agrees in having the fringe on fourth and fifth sternites fuscous, though it is only so on middle of fourth in *T. subnitens.* The *arizonensis* form also has the anterior legs very dark.

[In addition to the above types, I have four females and four males (paratypes), all taken at Riverside, June 22 to July 22, 1927 and 1928, at flowers of *Helianthus annuus* (2 ♀, 1 ♂); *Centaurea melitensis* (2 ♀); *Gutierrezia sarothræ* (1 ♂); *Senecio douglasii* (1 ♂), and *Coreopsis lanceolata* (1 ♂). The females show no significant variation, except in size from about 13 to 15 mm. The males are more variable. They are about 11.5 to 12.5 mm. long. Only one of the four paratype males has the clypeus covered with white hair, which is presumably abraded in the other specimens. The clypeus is considerably more coarsely and closely punctured than in the female, with a very few larger punctures intermixed. The scape and third antennal joint sometimes show hardly a trace of red, or the scape at base and apex, and the third joint on the outer side may be distinctly suffused with red. In one male the femora are considerably suffused with black, especially on anterior surface except at apex. The second recurrent is received by the second submarginal cell, either slightly or considerably before the middle (in the female paratypes at or slightly before the middle). On both wings of one male, and on the left wing of another specimen, the second intercubitus is incomplete below and reaches not more than one-half the distance toward the cubitus. Area between discal marks of mesoscutum sometimes thinly covered

with pale hair anteriorly. Eyes of the male in life yellowish green, those of the female bluish fuscous on somewhat more than the lower half, and yellowish green above.—P. H. T.]

Triepeolus trichopygus Cockerell and Timberlake, n. sp.

Male (Type). Length about 13 mm.; black with the labrum, large part of mandibles, first three antennal joints and base of fourth, and legs, red; pubescent markings pale ochreous-tinted, not white around antennæ, but broadly white (narrow below) on cheeks, pure white patches on middle and hind coxæ in front and three white bands with suffused margins on venter of abdomen; eyes (dry) blackish, the upper end pale green; labrum densely punctured; clypeus moderately convex, it and supraclypeal area finely and closely punctured, moderately shining, with scattered large punctures. Light ornaments of thorax consisting of upper border of prothorax (narrowed in middle), margins of tubercles, a pair of narrow fusiform stripes (pointed at either end, and not approaching margin) on anterior part of mesothorax, narrow lateral margins of mesothorax (failing anteriorly), scutello-mesothoracic suture, postscutellum and posterior margin of scutellum, posterior face of metathorax excluding middle (but invading sides) of basal area, and margins of mesopleura (very broadly above); large bare area on mesopleura quite closely and strongly punctured; scutellum moderately bilobed; tegulæ dark reddish; wings dilute brown; second cubital cell receiving recurrent nervure a little beyond middle; spurs black; hair on inner side of hind basitarsi reddish, but dull; transverse black band of first tergite very broad, very obliquely truncate laterally, the pubescent bands of this tergite both rather narrowly broken in middle; pubescent bands on segments two to five narrow, arcuate, entire; that on second tergite with rather small anterior lateral extensions, narrowed at junction with the band, and forming an acute angle with it; fifth tergite very finely and densely punctured anteriorly and posteriorly, central part obscurely reddish, shining, region just back of the basal densely punctured area abruptly differentiated, with well separated large punctures, the whole middle area of the tergite with thin reclining dark fuscous hair, and no light lateral patches, but the lateral margins densely covered with white hair; last ventral segment red, strongly curved downward at end.

Male. Entirely similar in appearance; hair in region of antennæ white; scape reddish black, but third antennal joint with a bright red patch; markings of thorax above paler, creamy-white; tubercles more hairy; bare patch on pleura not sharply defined; sixth band on abdomen white; fringes on fourth and fifth sternites long, stained with brownish apically.

Riverside, California (*Timberlake*). The female at *Senecio douglasii,* July 25, 1927, the male with the same data, except that it is July 29.

A very distinct species, apparently nearest to *T. penicilliferus* Brues from Texas, but that differs in the markings, the red clypeus, tubercles and tegulæ, etc. In spite of the strong superficial similarity, the two bees now described belong to different sections of the genus. In addition to the characters cited, *T. trichopygus* differs from *T. subnitens* in the smaller basal area of metathorax, the posterior lateral margins of which are strongly concave.

[Of this species I have four females and eleven males (paratypes) in addition to the types in Dr. Cockerell's collection. These were all collected at Riverside from July 12 to August 3 (all except one in 1927). They were all taken on *Senecio douglasii,* except one male taken July 12, 1928, on *Gutierrezia sarothræ.* The males vary from about 10 to 12 mm. in length; the females about 12 to 13 mm. in length. In two of the females the anterior margin of clypeus is suffused with red. In most of the males the antennæ are entirely black except a red patch on outer side of the third joint, but the scape may be slightly suffused with red especially at base and apex, and in one specimen is entirely red in front. In life the eyes of the male are green with the margins narrowly fuscous; in the female the eyes are black with a pale green spot at upper end.—P. H. T.]

Rediscovery of Euphydryas hermosa (Wright)

While collecting in the neighborhood of Roosevelt Camp, near Roosevelt Dam in Arizona, under dates of April 18, 19, 20, and 21 this year, Mr. Frank Morand of Los Angeles took a nice long series in both sexes of what proves to be the rare butterfly described and illustrated by Mr. W. G. Wright under the name of *hermosa.* These specimens are indeed flesh or salmon red in color and distinctly marked. This species has long remained unknown because of the type locality, which was foolishly given as "Southern Arizona."

Euphydryas quino (Behr) has been taken this year also at Mountain Springs (Imperial County) and at Jacumba (San Diego County).—J. D. Gunder.